

REMARKS

I. Summary of the Office Action and this Reply

This RCE Submission/Reply is filed after an Advisory Action mailed April 1, 2005 confirming entry of amendments filed with Applicants' Reply filed March 3, 2005. Accordingly, claims 1-4 and 6-31 are pending.

Claims 1, 3, 15, 21 and 23-29 stand rejected under Section 102(e) over U.S. Patent Application Publication No. 2002/0111924 to Lewis ("Lewis"). Claims 2, 4, 6, 11-14, 16-20, 22 and 30 stand rejected under Section 103(a) as being unpatentable over Lewis in view of The Microsoft Computer Dictionary. Claims 9 and 10 stand rejected under Section 103(a) over Lewis in view of the Microsoft Computer Dictionary and further in view of US Patent Publication No. 2002/00830962 to Hsu ("Hsu"). Claims 7 and 8 stand rejected under Section 103(a) over Lewis in view of the Microsoft Computer Dictionary and further in view of U.S. Patent Publication No. 2001/0018697 to Kunitake ("Kunitake").

The Examiner has not asserted any rejection for new independent claim 31, and thus claim 31 is believed allowable.

II. U.S. Patent Publication No. 2002/0111924 to Lewis

Lewis discloses a fuel dispensing system that includes XML processors. The system involves a fuel dispenser environment 10 (Figure 1) encompassing a refueling site or location that includes a plurality of individual fuel dispenser positions (e.g. gas pumps) 14. The fuel dispenser positions 14/gas pumps are linked over a local area

network (LAN) to a station operator terminal or an on-site convenience store.

Paragraph 80.

IV. Response to 102 Rejections

The Examiner has rejected claims 1, 3, 15, 21 and 23-29 under 35 U.S.C. § 102(e) as anticipated by Lewis.

A rejection under 35 U.S.C. § 102 is proper only if each and every element of the claim is found in a single prior art reference. MPEP § 2131.

Claims 1 and 3

Independent claim 1 recites "communicating a data model . . . through a bus of a printed circuit board from a special purpose processor for processing the document encoded in the markup language to a general purpose processor . . . each of said special purpose processor and said general purpose processor being provided as a respective integrated circuit on said printed circuit board." Thus, the special purpose processor is provided as an integrated circuit on a printed circuit board.

Providing a special purpose processor for processing a document encoded in a markup language is neither taught nor suggested by Lewis. Lewis discloses only that a dispenser position/gas pump 14 and/or a centralized operating module 26 may include a respective XML processor. As discussed in the application, conventional prior art XML processors included a general purpose microprocessor and specially configured software. See application, page 4, lines 15-17. The present invention seeks to avoid this arrangement, and the associated problems discussed in the application, by

providing such a special purpose processor. Lewis is absolutely devoid of any disclosure of a special purpose processor provided as an integrated circuit on a printed circuit board. Further, none of the other cited art teaches or suggests such a special purpose processor. Further still, it is noted that claim 9 formerly included a similar recitation, but that the Examiner has not made any rejection relating to the limitation of provision of the special purpose processor as an integrated circuit for processing a document encoded in a markup language.

Further, claim 1 recites that both the special purpose processor and the general purpose processor are provided on the same printed circuit board. See application, page 17, lines 7-9. In contrast, Lewis discloses a distributed computing environment in which the special purpose processor 56 is in a dispenser position/gas pump 14, and the general purpose processor is in a separate centralized operating module (such as a station operator terminal in an on-site convenience store). Thus, Lewis discloses that the special purpose processor and general purpose processor are provided on separate printed circuit boards.

As shown in Figure 3, the dedicated XML processor 56 of a dispenser position (e.g. gas pump) 14 may communicate with a separate XML processor 30 of the remotely located centralized operating module 26. However, the dispenser's (e.g. gas pump's) 14 dedicated XML processor 56 may communicate with the centralized operating module's XML processor 30 only via a local area network (LAN) 24, as best shown in Figure 3.

Further, to the extent that the centralized operating module 26 includes its own XML processor 30, as shown in Figure 2, there is absolutely no disclosure that the XML

processor 30 is anything other than a general purpose processor running special purpose software. Further still, even if the XML processor were a hardware processor, which it is not, there is absolutely no disclosure in Lewis that such a hardware processor would be provided on the same printed circuit board.

Accordingly, Lewis fails to teach or suggest all limitations of claim 1. Claim 1 is thus patentable. Claim 3 depends from claim 1 and is likewise patentable.

Reconsideration and withdrawal of the rejections of claims 1 and 3 are requested respectfully.

Claims 15, 21, 23 and 24

Independent claim 15 includes recitations similar to that of claim 1, namely "a memory provided on a printed circuit board; a general purpose processor provided on said printed circuit board . . . and a special purpose processor provided as an integrated circuit on said printed circuit board." Accordingly, claim 15 is patentable for reasons similar to those set forth above for claim 1. Further claim 15 recites that the special purpose processor is a dedicated processor, namely a processor dedicated to "certain processing of documents encoded in the markup language." This is neither taught nor suggested by the cited art.

Claims 21, 23, and 24 depend from the claim 15 and are likewise patentable. In addition, claim 21 recites that "said special purpose processor comprises a supplemental general purpose processor for executing computer readable code for processing the document." Lewis neither teaches nor suggests a single printed circuit

board including at least two general-purpose processors, one of which is part of a dedicated special purpose processor for processing documents.

Claim 24 recites that the system also includes a "program stored in the memory and executable by said general purpose processor for recognizing the document as encoded in the markup language and responsively controlling said special purpose processor to process the document." Lewis provides no such disclosure. Instead, Lewis merely describes a system in which certain processing of an XML document may be performed at a first device before data is transmitted by a local area network to another device having a separate XML processor. Lewis provides no disclosure whatsoever of any "recognition" by a general purpose processor or other general purpose processor initiated intelligent cooperation of a general-purpose processor and a dedicated special purpose processor.

Reconsideration and withdrawal of the rejections of claims 15, 21, 23 and 24 are requested respectfully.

Claims 25-29

Independent claim 25 is directed to a specially configured "printed circuit board comprising: a local communication bus; a general purpose processor for executing computer readable code stored in a memory, said general purpose processor being operably connected to said local communication bus; and a special purpose processor operably connected to said general purpose processor via said local communication bus for communicating therewith." Further, claim 25 recites that the special purpose processor is "a dedicated integrated circuit", and thus is similar to claim 1.

As discussed above, Lewis provides no teaching or suggestion whatsoever of both a general-purpose processor and a special purpose processor on a single printed circuit board, and connected by a local communication bus.

Claim 25 further recites that the special purpose processor is specially configured for: "receiving from said general purpose processor, via said local bus, a document encoded in a markup language; processing the document; and communicating the document, as processed, to a target." Lewis provides no teaching or suggestion of passing a document encoded in a markup language from a general purpose processor to a special purpose processor.

As best understood by the undersigned, Lewis discloses only passing of a document from a special-purpose dedicated XML processor 56 to a centralized module 26 that may include another XML processor 30. Accordingly, the document is passed from a special purpose processor 56, not from a general purpose processor as recited in claim 25.

For at least these reasons, Lewis fails to teach or suggest all limitations of claim 25, and claim 25 is thus patentable. Claims 26-29 depend from claim 25 and are likewise patentable

As asserted by the Examiner on page 4 of the Action, the module 26 of Figure 3, which includes an XML processor 30, is a general-purpose processor. However it is noted that the information flow in Lewis is from the dispenser position (special purpose processor) 14 to the module 26. This is contrary to the flow of information claimed, namely from a general-purpose processor to a special-purpose processor.

Regarding claims 26 and 27, Lewis provides no disclosure, particularly at paragraph 110, that the special purpose processor "comprises a dedicated integrated circuit that is specially configured for processing the document." As discussed in the instant application, a conventional XML processor included a general-purpose processor hardware configured with special-purpose software. See application, page 4, lines 18-20. Lewis provides absolutely no disclosure beyond this conventional type of XML processor implementation. In contrast, claim 26 recites a special-purpose processor comprising a dedicated integrated circuit. This is neither taught nor suggested by Lewis.

Claim 28 recites that a printed circuit board including both a general-purpose processor a special purpose processor, "wherein said special purpose processor comprises a supplemental general purpose processor." This is neither taught nor suggested by Lewis.

Therefore, reconsideration and withdrawal of the rejections of claims 25-29 are requested respectfully.

V. Response to 103 Rejections

The Examiner has rejected claims 2, 4, 6, 11-14, 16-20, 22 and 30 under 35 U.S.C. §103(a) , asserting obviousness over various combinations of Lewis, The Microsoft Computer Dictionary, Hsu and Kunitake.

Claims 2, 4, 6-8, 11-14 and 30

Claims 2, 4, 6-8, 11-14 and 30 depend from claim 1 and are likewise patentable

for the reasons set forth above. In addition, it is noted that the Microsoft Computer Dictionary is not cited in the notice of references cited and it is unclear as to whether it is properly citable.

With respect to claim 2, it is noted that mXML is not merely another tag based XML vocabulary but rather is a particular machine oriented notation that is the subject of one or more patent applications commonly assigned with present application to the assignee hereof.

With respect to claim 4, it is noted that claim 4 has been amended and the rejection is thus moot.

Reconsideration and withdrawal of the rejections of claims 2, 4, 6-8, 11-14 and 30 are requested respectfully.

Claims 16-20 and 22

Independent claim 15 is patentable for the reasons set forth above. Claims 16-19 and 22 depend from claim 15 and are likewise patentable. In addition, claims 16 and 17 are patentable for the reasons set forth above for claims 2 and 3, respectively. Claims 18 and 19 are patentable for the reasons set forth above for claims 26 and 30, respectively. Claim 20 is patentable for reasons similar to those set forth above for claim 24. Claim 22 is patentable for reasons similar to those set forth above for claims 20, 2 and 3.

Reconsideration and withdrawal of the rejections of claims 16-20 and 22 are requested respectfully.

Claims 9 and 10

Claims 9 and 10 depend from claim 1 and are likewise patentable. In addition, claim 9 recites that "said special purpose processor is specially configured for parsing the document." Accordingly claim 9 is patentable for reasons similar to those set forth above for claim 26. Claim 10 is patentable for reasons similar to those set forth above for claim 30.

Reconsideration and withdrawal of the rejections of claims 9 and 10 are requested respectfully.

New Claim 31

New claim 31 has not been rejected and thus is deemed allowable.

New claim 31 is directed to a "system for efficient processing of a document encoded in a markup language." The system includes "a dedicated processing device . . . and a plurality of computing devices, each of said computing devices being operably connected to said processing device for communication therewith.

The dedicated processing device includes a special purpose processor that is "provided as an integrated circuit on said printed circuit board and . . . specially configured for certain processing of documents encoded in the markup language."

Each of the plurality of computing devices includes its own respective "general purpose processor provided as an integrated circuit on said printed circuit board . . . for executing computer readable code stored in said second memory, said computer readable code configuring said general purpose processor to perform processing distinct from said certain processing of documents encoded in the markup language

performing processing distinct from the processing performed by the dedicated processing device." Each of the plurality of computing devices also includes "a first program stored in said second memory and executable by said general purpose processor for recognizing the document as encoded in the markup language and transmitting the document to said dedicated processing device for processing by said special purpose processor."

Accordingly, in this embodiment, the dedicated processor is provided remotely but is network accessible for supporting numerous computing devices and thereby offloading processing for such numerous devices. See application, pages 3-7; Figure 3.

Thus, the dedicated processor is accessible to multiple general-purpose processors, via a communications network, and each general-purpose processor is provided with logic/intelligence for recognizing him documents that may be processed by the dedicated processor and for transmitting such documents to the dedicated processor via the network for processing. This is neither taught nor suggested by Lewis or the other cited art. In contrast, Lewis discloses multiple dedicated XML processors transmit information to a single other (perhaps general-purpose) processor, as shown in Figure 3.

For at least these reasons, new claim 31 is patentable.

CONCLUSION

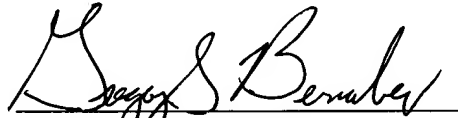
In view of the foregoing amendments and remarks, Applicant believes claims 1-4 and 6-31 to be patentable and the application to be in condition for allowance, and

RCE Submission/Reply to final Office Action dated January 4, 2005

requests respectfully issuance of a Notice of Allowance. If any issues remain, the undersigned requests a telephone interview prior to the issuance of an action.

Respectfully submitted,

Date: April 4, 2005

A handwritten signature in black ink, appearing to read "Gregory S. Bernabeo", written over a horizontal line.

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